GOVERNMENT OF INDIA
WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION
LOK SABHA

UNSTARRED QUESTION NO:1156
ANSWERED ON:09.02.2017
Flood Forecasting
Gogoi Shri Gaurav

Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANAGA REJUVENATION be pleased to state:

(a) the details of programmes/schemes relating to flood forecasting being implemented by the Government in the country;

(b) whether any geo-spatial techniques are being used in the flood control strategies, if so, the details and the proposed technology thereof; and

(c) if not, the reasons therefor along with the details of other technology being used for flood control in the country?

Answer

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION
(DR. SANJEEV KUMAR BALYAN)

(a) Central Water Commission started flood forecasting service in the year 1958 by establishing first scientific flood forecasting unit (FFU) at Delhi for issuing water level forecasts of Yamuna for the National Capital, Delhi. A Flood Forecast and Warning Organisation was set up in 1969 to establish forecasting sites on interstate rivers in the country and 41 forecasting sites were added in 1969.
Central Water Commission has been expanding and modernising the flood forecasting network in the country. Up to XI Plan, Central Water Commission had set up a network of 175 Flood Forecasting Stations which included Inflow Forecasting for 28 reservoirs covering 18 States/UTs. This Ministry has approved a Plan Scheme during XII Plan for Rs.281 crore for flood forecasting, modernisation and expansion of the flood forecasting network for automatic data collection, expeditious transmission and flood forecast dissemination. The scheme has the following broad components:

i) The Flood Forecasting network is to be expanded to 275 flood forecasting stations covering 25 States/UTs. Simultaneously, the support network of hydrological observation sites would be increased to 1118, out of which 1074 stations would be on an automatic satellite based telemetry system. As a result of the telemetry network, information would be available on the real time basis. It will eliminate the delays in dissemination of flood warnings to the States experienced in the manual system of dissemination. It is expected that with the expanded network of flood forecast systems, the number of flood warnings issued annually would go upto 10,000 covering hitherto uncovered areas.
i) All the 12 Regional Offices of CWC will have the facility of carrying out data modeling for making timely forecasts to forewarn the community and the local authorities with lead time upto 72 hours before occurrence of the event. This would give community enough time to ensure preventive action to save life and property.
ii) Inundation forecast on pilot basis in 3 mha flood prone area of Kosi, Brahmaputra, Godavari .and Sabri sub-basins using high resolution Digital Elevation Models available with National Remote Sensing Centre.

The rainfall-runoff based mathematical models utilizing observed rainfall, Automatic Weather Station(AWS)/Automatic Rain Gauge(ARG) data and Quantitative Precipitation Forecast(QPF) of IMD for more warning/lead time say up to 3 days is being adopted in select basins in formulation of forecast..
(b) & (c) Products derived from Remote Sensing such as Soil data, Land-use data, Digital Elevation Model (DEM) data and Geographical Information System (GIS) are being used in the development of Flood Forecasting and inundation forecasting mathematical models. Remote sensing based rainfall estimates of IMD and other global institutions are also being used as input in running of these mathematical models.
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